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a question that I have often been asked ; in fact I have often made the same inquiry myself. When the Judge wanted to know of Sam. Weller whether he spelt his name with a V or a W he replied : "That depends on the taste and fancy of the speller." And I think that in applying specific or varietal names, much depends on the taste and fancy of the one giving them. I think a definition of a variety might be, a shell which evidently belongs to a given species but which presents certain constant minor variations from the type. Sometimes these may be color, or of size, form, sculpture ; in the presence or absence of a tooth, or other detail, but it should always be constant to be worth anything, and even when it is, conchologists do not adhere to any strict rule in naming. Among the cones and olivas, coloring is often the principal distinguishing character ; while with shells like Donax and many of the Neritas and Neritinas, it counts for nothing.

I believe that those of us who are more conservative should collect and study not with a view to the formation of new species, but to cut down and relegate to the synonymy the hundreds and perhaps thousands of false ones which already exist. Instead of making the inquiry over a puzzling form, isn't it new, it would be better to ask, doesn't it connect species that are now considered separate. Mr. Tryon gloriously inaugurated the work of cutting down the list of our names, and I believe that as great honor and fame awaits the iconoclast in the future, as can possibly belong to the most assiduous member of the new school of the present.

## ON CREPIDULA GLAUCA.

#### BY JOHN FORD.

In his recently published Catalogue of the Marine Mollusks of the Southeastern coast of the United States, Dr. Dall appears to have altogether ignored the existence of Crepidula glauca, Say, the figure of the latter, taken from Gould's Invertebrata of Massachusetts, having been utilized by him to represent a juvenile C. fornicata, Say. The same mistake was made by my friend, the late Mr. Geo. W. Tryon, Jr., in one of his early publications, but a more recent examination of a large number of specimens satisfied him that the species was absolutely distinct from C. fornicata or any other species belonging to the genus.

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The writer's first knowledge of the characters of the two species certainly convinced him that they were widely separated, and in order that this fact might be made apparent to others, some fine suites of both forms were shown and commented upon at a recent meeting of the Phila. Acad. of Nat. Sciences, and, it may be added, that the conchologists present fully endorsed the views of the speaker.

The several prominent characters exhibited by C. fornicata are as follows :

1st, the *lateral* curve of the apex, which, though very prominent, is, as a rule, closely attached to the body of the shell.

2d, the bow-like curve of the free edge of the interior arch.

3d, the well-defined nick at the junction of the latter with the outer wall of the shell. 4th, the *concare* form of the septum, which is the same in all stages of growth.

Other characters might be noted, but those given will doubtless suffice to separate the species, as C. glauca has none of the features alluded to.

The apex of the latter species is quite small and comparatively free from contact with the body of the shell. It is also horn-like in appearance, usually shining, and but slightly inclined to curve laterally.

The free edge of the septum is straighter than that of C. fornicata, and the notch is not only absent but replaced by a slight advance of that part of the plate along and against the inner wall of the shell. Another, and perhaps the strongest character of the group is the convex form of the septum.

This feature, which is a constant one, may be safely depended on to distinguish the species at once from C. fornicata *in which the septum is always depressed.* The general outline of the shells will also help the student to divide the species, C. fornicata as a rule being pearshaped, while C. glauca is usually disk or quoit-like in form. The prevailing color of the latter is also a distinguishing mark, the inside of the shells being of a dark brown color and the outside a dark gray or purple.

That a species so well marked as C. glauca should be dropped or merged into another without a given reason, is no small matter, and more than one student will doubtless thank the eminent Doctor for some explanation.

It may be of interest for some readers of the "Nautilus" to know that a very fine suite of the shells can be seen in the New Jersey THE NAUTILUS.

collection of the Philadelphia Acad. of Nat. Sciences ; also, that the writer, who has collected many scores of specimens, has never found them associated with any other species of the genus.

John Ford.

Philadelphia, Pa., Dec. 12th, 1889.

## THE SHELL-BEARING MOLLUSCA OF RHODE ISLAND.

BY HORACE F. CARPENTER.

# FAMILY UNIONIDÆ.

This family formerly called Naides, embraces those shells commonly called fresh-water clams or mussels. They are found in rivers and ponds all over the world, but they reach their greatest perfection in this country. Over twelve hundred species are known to science, named and properly classified, of which more than half inhabit the U.S. This family has been made the special study of the late Dr. Isaac Lea, of Philadelphia, who died at the advanced age of ninety-five years, on the eighth of Dec., 1886. He devoted fifty years of his life to the study of the Unionidæ and has described more new species than all other conchologists together. He has read before scientific and other societies one hundred and ifty-seven papers and has been honored by degrees and honorary membership of twenty-five of the most prominent universities and scientific associations of the world. His great work, "Observations on the genus Unio" consists of thirteen quarto volumes, illustrated by hundreds of beautiful plates.

The shells of this family are not in general very attractive on the outside, but the interior of the valves are always lined with a beautiful pearly substance called nacre, which in some specimens are pure white and in others salmon, rose-red, blue, green, purple, etc. The sexes in this family are distinct, which is an exception to the rule in a large majority of the species of Mollusca, where the sexes are united in each individual. The shells exhibit but little variation in form except the usual one, that the females are more ventricose and broader behind than the males.

The animals of this family are all capable of producing pearls, some of which are of great beauty and value. In one instance sixteen pearls were obtained from a single specimen. One of the